

## Preliminary DRAFT North Lake Washington Chinook Population - Tier 2 - Initial Habitat Project List

Includes Potential Restoration and Protection Projects by Reach.

North Creek Subarea Reaches 1-10 (plus Silver and Penny Creeks)

### Basinwide Recommendations:

Project #	Description
N604	Study where retrofitting stormwater facilities would have greatest benefit in restoring baseflows & implement. H benefit;H feasibility to study, L to construct.

### Lower North: Reaches 1-5

#### Reach 1: North Creek from mouth to top of Cascadia Restoration project

##### Restoration

**Technical Hypothesis:** Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
N365	1	4	new	<b>Add Conifers to Cascadia Project:</b> Add additional conifers to the previously done Cascadia restoration project for future LWD recruitment.	Y		Beavers may affect what areas conifers can be planted; should be taken into consideration during planting plan. Property is 59 acres and owned by the University of Washington.	<b>M</b>	<b>H</b>
N366	1	4		<b>Restore Lowest Reach of North Creek:</b> Explore improving North Creek corridor from mouth to start of Cascadia Project.	Y		Creek is very constrained in this reach by roads and a new interchange is planned in area. Land is owned by King County and WDOT. Potential WDOT mitigation. Reach is 624 linear feet.	<b>M/L</b>	<b>M/L</b>

##### Protection

**Technical Hypothesis:** Protect forest cover and wetlands.

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
	1	1			No projects identified at this time.					

**Reach 2: North Creek from top of Cascadia Restoration project to upstream end of business park****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
N367	2	1	new	<b>Floodplain Restoration in Reach 2:</b> Explore possible floodplain restoration on unused baseball diamond north of 195th and privately owned property between 195th and I-405. Setback levee, increase flood storage, restore off-channel habitat and add large woody debris.	Y		Possible WDOT mitigation.	<b>H</b>	<b>M</b>
N368	2	1	new	<b>Restore Riparian Wetland North of 195th:</b> Add large woody debris, and remove invasive plant species and plant native vegetation.	Y		Site experiences high peak flows, well connected with North Creek. Property is 1.46 acres and is in Bothell Business Park.	<b>M/L</b>	<b>H</b>
N369	2	1	new	<b>Restore Riparian Wetland South of North Creek Parkway N:</b> Increase flood storage, setback levee, add large woody debris, remove invasive plant species and plant native vegetation.	Y		Likely to be FEMA issues with project due to high peak floods in reach. Past project done on site to breach levee - may need maintenance. Property owner willingness unknown. 11 acre site within Bothell Business Park.	<b>M</b>	<b>L</b>

**Protection****Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N370	2	5		new	<b>Protect Forested Property to East of Reach 2:</b> Protect forested, steep sloped property to east of business park in reach. Includes wetlands and groundwater recharge areas.	Y		Development proposal in permitting for site. Feasibility would increase if funds were available in near future. Site is 98 acres.	<b>H+</b>	<b>L</b>
N371	2	5		new	<b>Protect Boy Scouts Property:</b> Protect forested, steep sloped property to west of business park in reach. Includes wetlands and groundwater recharge areas.	Y		Potential development proposal for site. Feasibility would increase if funds were available in near future. Property is 31.35 acres.	<b>H+</b>	<b>L</b>

**Reach 3: North Creek from upstream end of business park to 228th SE Canyon Park Rd Crossing****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
	3	3		No projects identified at this time.					

**Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N372	3	4		new	<b>Protect Forested Property North of 240th:</b> Protect forested, undeveloped property North of 240th through conservation easement or acquisition.	Y		Reach has highest spawning area on North Creek. Last undeveloped portion of North Creek within City of Bothell. Potential upzoning being considered. Feasibility would increase if funds were available in near future.	<b>H</b>	<b>M/L</b>

**Reach 4: North Creek from 228th SE Canyon Park Rd Crossing to 208th St Culvert****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N373	4	2	new	<b>Floodplain Restoration North of 228th:</b> Acquire 16 acre property North of 228th, return creek to natural channel by removing berm that redirected it. Restore riparian vegetation and side channels, add large woody debris. Increase flood storage and flood refuge habitat.	Y		Property is undevelopable.	<b>H</b>	<b>H/M</b>
N374	4	2	new	<b>Enhance Mouth of Palm Creek:</b> Enhance mouth and lower 100 yards of Palm Creek as cold water refuge for juvenile Chinook.	Y		Barriers for coho have been identified in Palm Creek by the Adopt-a-Stream Foundation.	<b>M</b>	<b>H</b>
N375	4	2	new	<b>Enhance Creek in Thrashers Corner Area:</b> Enhance incised stream channel within Thrashers Corner area (owned by the City of Bothell), restore riparian vegetation, plant conifers and add large woody debris.	Y		Beaver on the site will be an issue for riparian restoration.	<b>H</b>	<b>H</b>

**Protection****Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N376	4	3		new	<b>Protect Forested Wetland South of Malby Road:</b> Protect forested, 10.5 acre wetland South of Malby Road, including unnamed tributary.	Y		Property has development potential.	<b>H/M</b>	<b>M/L</b>

**Reach 5: North Creek from 208th St Culvert to 196th St culvert****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
N377	5	2	new	<b>Expand Twin Creeks Project:</b> Expand existing restoration project upstream and downstream of existing area just upstream of 208th. Restore riparian vegetation, add large woody debris, enhance side channel habitat.	Y			<b>H</b>	<b>H</b>
N378	5	2	new	<b>Continue North Creek School Project:</b> Work with school to do additional riparian restoration, large woody debris addition and side channel enhancements on their property.	Y			<b>H</b>	<b>H</b>
N379	5	2	new	<b>Riparian Restoration and Stream Enhancements:</b> Work with Landowners in Reach 5 to restore riparian vegetation and to do stream enhancements. Adopt-a-Stream Project in Snohomish County portion of North Creek.	Y		Adopt-a-Stream's program could be expanded to Bothell portion of creek. Project is funded.	<b>H</b>	<b>H</b>

**Protection****Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N380	5	2		new	<b>Pursue Conservation Easement on Property Adjacent to Twin Creeks Project:</b> Acquire easement for future stream enhancement work on Asia First property adjacent to Twin Creek project.	Y			<b>H</b>	<b>?</b>

**Upper North: Reaches 6-10, Silver and Penny Creeks****Reach 6: North Creek from 196th St culvert to confluence Nickel Creek and North Creek Regional Park boundary (John Bailey Rd)****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
N381	6	2	new	<b>Buyout Frequently Flooded Home:</b> Buyout frequently flooded home at end of Waxon Road and restore floodplain and add large woody debris.	Y		If not done will impede further restoration in reach such as adding large woody debris.	<b>H</b>	<b>H</b>

N382	6	2	new	<b>Add Large Woody Debris:</b> Add large woody debris to Reach 6.	Y		Ability to add large woody debris to reach partially depends on whether not flood buyout occurs at end of Waxon Road.	H	H
N383	6	2	new	<b>Reforest Cleared Parcel:</b> Explore replanting cleared parcel north of 192nd and East of Waxon Road.	Y		Property is privately owned.	H/M	?
N384	6	2	new	<b>Riparian Restoration and Stream Enhancements:</b> Work with Landowners in Reach 6 to restore riparian vegetation and to do stream enhancements. Adopt-a-Stream Project in Snohomish County portion of North Creek.	Y		Adopt-a-Stream's program could be expanded to Bothell portion of creek. Project is funded.	H	H

### Protection

**Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N385	6	3			<b>Protect Large Forested Parcels:</b> There are several large forested parcels in reach 6 that should be protected through acquisition or conservation easements.	Y		Access limited to sites. No known development proposals. If funding available soon, feasibility increases.	H	M

### Reach 7: North Creek from confluence Nickel Creek (in North Creek Regional Park) to confluence Penny Creek (begin Mill Creek development area) Restoration

**Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N386	7	2	new	<b>North Creek Regional Park Stream Channel Enhancement:</b> Enhance North Creek stream channel within North Creek Regional Park, add large woody debris, encourage meandering of channel and restore riparian vegetation.	Y			H	H
N387	7	2	new	<b>Floodplain Restoration North of Park:</b> Acquire property west of 9th Ave. and north of the North Creek Regional Park and remove dike, reconnect North Creek to floodplain and wetlands.	Y		Enforcement action occurred recently due to illegal ditching on property. Feasibility higher if funds are available sooner. Possible willing seller. Wetlands undevelopable - protected by regulations.	H	H/M
N388	7	2	new	<b>Riparian Restoration and Stream Enhancements:</b> Work with Landowners in Reach 7 to restore riparian vegetation and to do stream enhancements. Adopt-a-Stream Project in Snohomish County portion of North Creek.	Y		Adopt-a-Stream's program could be expanded to Bothell portion of creek. Project is funded.	H	H

**Protection****Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N389	7	5		3a	<b>Upland Forest Cover Protection:</b> Acquire North Creek Hillslope Forest Site, 53 acres of mature second-growth forest/wetlands on right bank of North Creek adjacent to North Creek Regional Park. Includes minor tributaries and groundwater sources.	Y		Developable.	<b>H</b>	<b>M</b>

**Reach 8: North Creek from confluence Penny Creek (begin Mill Creek development area ~164th) to top end of Mill Creek development area (appro Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N390	8	1	new	<b>Restoration within City-Owned Reach of North Creek:</b> Reach 8 is owned by the City of Mill Creek. Implement restoration recommendations from study done by the Watershed Company including riparian restoration, adding large woody debris and using bioengineering techniques to reduce bank erosion.	Y		Partially funded and being pursued by City of Mill Creek.	<b>H</b>	<b>H</b>

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Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
	8	4			No projects identified at this time.					

**Reach 9: North Creek from upper end of Mill Creek development area (approx 156th) to just downstream of McCollum Park****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
N391	9	3	new	<b>Riparian Restoration and Stream Enhancements:</b> Work with Landowners in Reach 9 to restore riparian vegetation and to do stream enhancements. Adopt-a-Stream Project in Snohomish County portion of North Creek.	Y		Adopt-a-Stream's program could be expanded to Bothell portion of creek. Project is funded.	<b>H</b>	<b>H</b>
N392	9	3	new	<b>Restoration in Native Growth Protection Area:</b> Area below McCollum Park in Native Growth Protection Easement. Study restoration opportunities and implement such as adding LWD, riparian restoration and conifer underplanting.	Y			<b>M</b>	<b>H</b>

**Protection****Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N393	9	2		new	<b>Protect Forested Wetland:</b> Protect forested wetland in Reach 9 between I-5 and mainstem of North Creek. Includes unnamed tributary and groundwater sources.	Y		May not be developable.	<b>H</b>	<b>M</b>

**Reach 10+: North Creek from just downstream of McCollum Park to Headwaters****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
N394	10	3	new	<b>Riparian Restoration and Stream Enhancements:</b> Work with Landowners in Reach 10 to restore riparian vegetation and to do stream enhancements. Adopt-a-Stream Project in Snohomish County portion of North Creek.	Y		Adopt-a-Stream's program could be expanded to Bothell portion of creek. Project is funded.	<b>H</b>	<b>H</b>

N395	10	3	new	<b>McCollum Park Restoration:</b> Install grade control structures (very large logs) from Northwest Stream Center to 128th to reduce peak flows and erosion; restore riparian vegetation.	Y			<b>H</b>	<b>H</b>
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**Protection****Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N396	10	1		new	<b>Protect North Creek Headwaters:</b> Acquire 10 acre parcel South of Everitt Mall on 3rd Ave SE.	Y		Might have willing seller.	<b>H</b>	<b>?</b>
N397	10	1		new	<b>Acquire 5-acre Parcel for Future Retention/Detention Facility:</b> Acquire 5 acre parcel immediately east of 7.5-acre parcel already owned by City of Everitt (being used for low flow augmentation). Undeveloped, forested. Potential site for future retention/detention facilities.	Y		Land owner unwilling. Very expensive (1.5 million). Possible mitigation project. High benefit if used for retention/detention.	<b>H</b>	<b>L</b>

**Silver Creek****Reach 1: Silver Creek from mouth to 196th Culvert****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
	Silver 1	4		No projects identified at this time.					

**Protection****Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
N398	Silver 1	7		new	<b>Acquisition of Parcel Including Frontage on Both Silver and North Creeks:</b> Abandoned house for sale with parcel that includes frontage on both Silver Creek and North Creek. Once acquired restore riparian vegetation.	Y			<b>M/L</b>	<b>?</b>



**Penny Creek****Reach 1: Penny Creek from mouth to Retention pond****Restoration****Technical Hypothesis:** *Reduce sedimentation, remove bank armoring, increase channel connectivity, add LWD and restore riparian vegetation.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
N399	Penny 1	3	1b	<b>Fish Passage:</b> Two culverts along Mill Creek Community Trail, RM 1.00, are degrading and represent fish passage barriers due to slope conditions or imminent failure.	Y		Project started; willing landowner; needs money. Greater benefit to coho than Chinook.	<b>L</b>	<b>H</b>

**Protection****Technical Hypothesis:** *Protect forest cover and wetlands.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasibility H, M, L
	Penny 1	6		8	No projects identified at this time.					